TCCCGAGGCAGTTATGTGAAATATGGCCTCGATCTTGGAGGTCCGGGTGGGAGTGGGGGT

GGGGTGGGGGTGGGGGTGAAGGTGGGGGGCGGGCGCGCTCAGGGAAGGCGGGTGCGCGCC

TGCGGGGGCGAGATGGGCAGGGGGCGGTGCGTGGGTCCCAGTCTGCAGTTAAGGGGGCAG

1

GAGTGGCGCTGCTCACCTCTGGTGCCAAAGGGCGGCGCAGCGGCTGCCGAGCTCGGCCCT 60

GGAGGCGGCGAGAACATGGTGCGCAGGTTCTTGGTGACCCTCCGGATTCGGCGCGCGTGC 20

GGCCCGCCGCGAGTGAGGGTTTTCGTGGTTCACATCCCGCGGCTCACGGGGGAGTGGGCA 80

GCGCCAGGGGCGCCCGCCGCTGTGGCCCTCGTGCTGATGCTACTGAGGAGCCAGCGTCTA 40

GGGCAGCAGCCGCTTCCTAGAAGACCAGGTAGGAAAGGCCCTCGAAAAGTCCGGGGCGCA 00

CTTGTTTTGTTTGGTGTGTGATTTCGTAAACAGATAATTCGTCTCTAGCCCATTCTAGGA 60

GGAGGAGGAGATAACCGCGGTGGAGGCTTCCCATTCGGGTTACAACGACTTAGACATGTG 20

GTTCTCGCAGTACCATTGAACCTGGACCTCCCTTCACACAGCCCTCAATCGTGGGAAACT 80

GAGGCGAACAGAGCTTCTAAACCCACCTCAGAAGTCAGTGAGTCCCGAATATCCTGGGTG 40

GGAATGACTAAGACACACACACACACACACACACACACACACACACACAGTAGGAAATGT 00

FIG. 1a

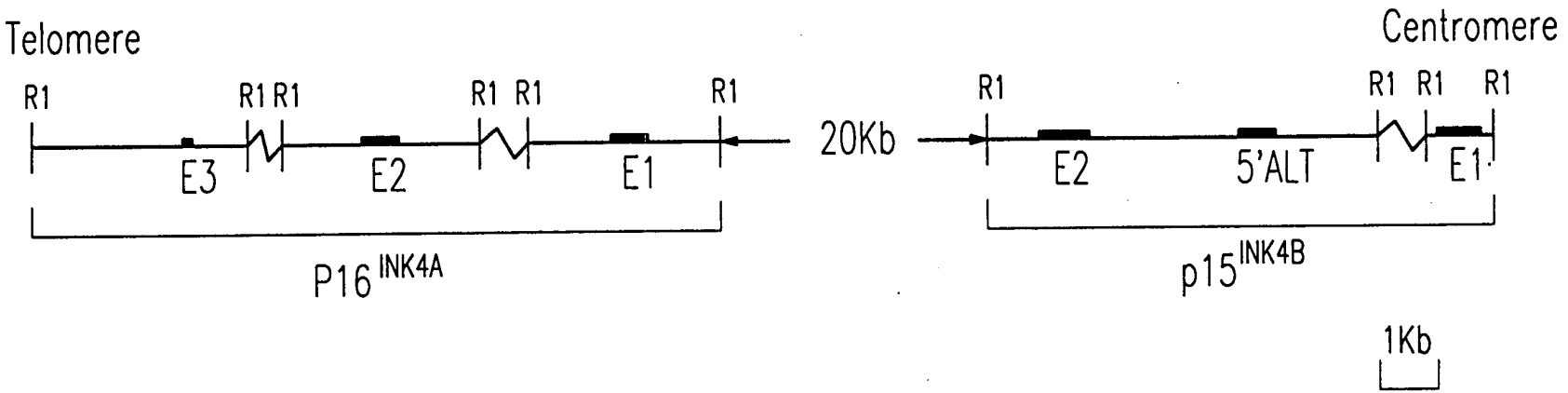

Telomere
Centromere
R1
R1 R1
R1 R1
R1
20Kb
R1
R1 R1 R1
E3
E2
E1
E2
5'ALT
E1
P16 INK4A
p15 INK4B
1Kb

FIG. 1b

FIG. 2a

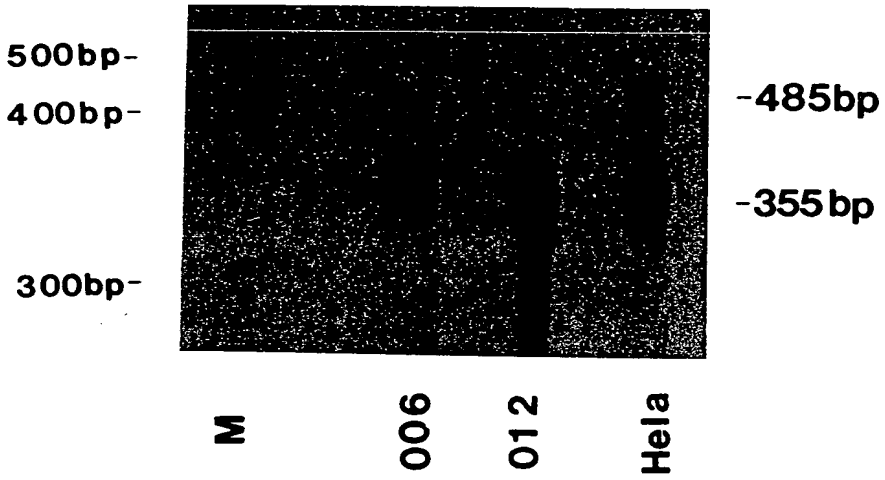


FIG. 2b

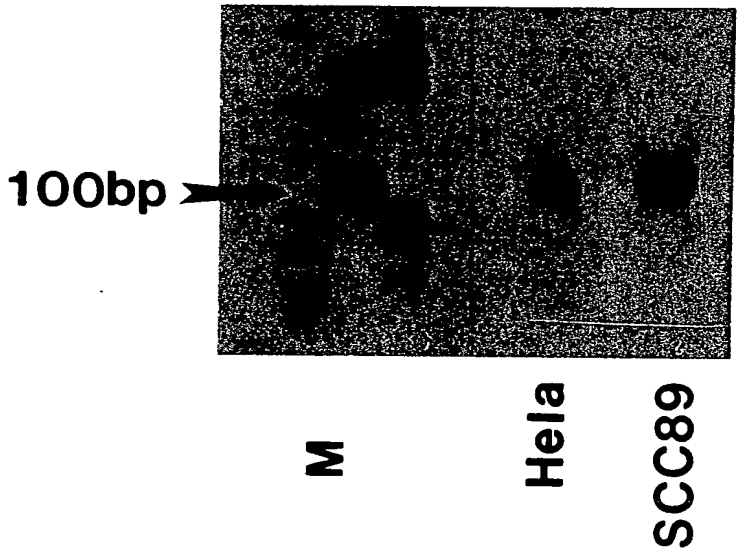
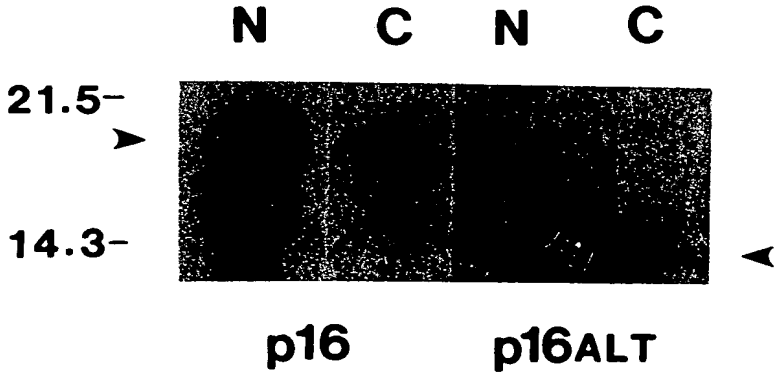


FIG. 2c



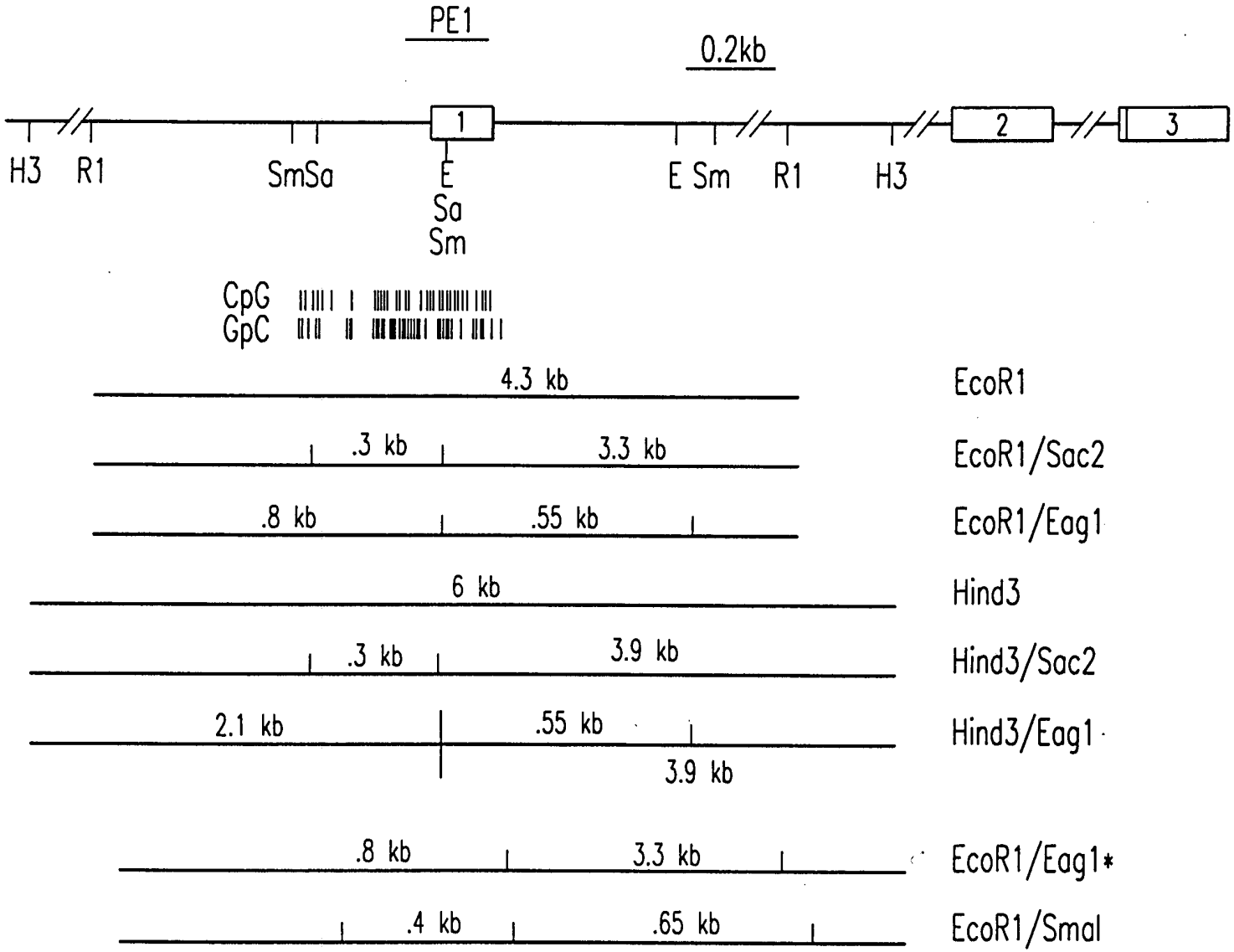

PE1
0.2kb
1
2
3
H3
R1
SmSa
E
Sa
Sm
E Sm
R1
H3
CpG
GpC
4.3 kb
EcoR1
.3 kb
3.3 kb
EcoR1/Sac2
.8 kb
.55 kb
EcoR1/Eag1
6 kb
Hind3
.3 kb
3.9 kb
Hind3/Sac2
2.1 kb
.55 kb
3.9 kb
Hind3/Eag1
.8 kb
3.3 kb
EcoR1/Eag1*
.4 kb
.65 kb
EcoR1/SmaI

FIG. 3a

P16 EXON 1

<p16e1.nt

ACATTCGCTAAGTGCTCGGAGTTAATAGCACCTCCGTCCGTAGTCACGGCTTCACGCGTCCCTTCCT

GGAAAGATACACGGTCCCTCCAGAGGATTTGAGGGACAGGGTAGGAGGGGGCTCTTCCGCCAGCA

CCAGGAGGAAGAAAGAGGAGGGGCTGGCTGGTCACCAGAGGGTGGGGCGGACCGCGTGCGCTCG

GCGGCTGCGGAGAGGGGGAGAGCAGGCAGCGGGCGGCGGGGAGCAGCATGGAGCCGGCGGCGG

GGAGCAGCATGGAGCCTTCGGCTGACTGGCTGGCCACGGCCGCGGCCCGGGGTCGGGTAGAGGA

GGTGCGGGCGCTGCTGGAGGCGGGGGCGCTGCCCAACGCACCGAATAGTTACGGTCGGAGGCCG

ATCCAGGTGGGTAGAGGGTCTGCAGCGGGAGCAGGGGATGGCGGGCGACTCTGGAGGACGAAGTT

TGCAGGGGAATTGGAATCAGGTAGCGC

FIG. 3b

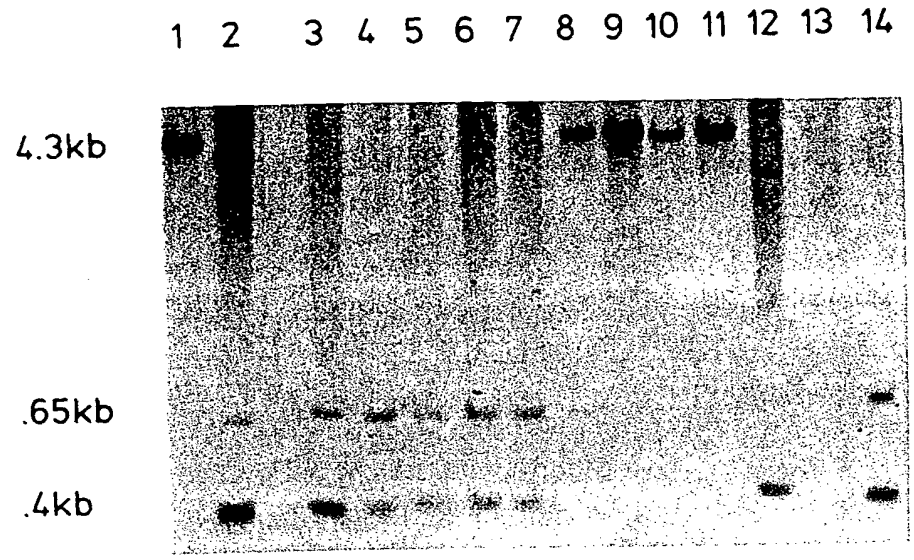


FIG. 4a

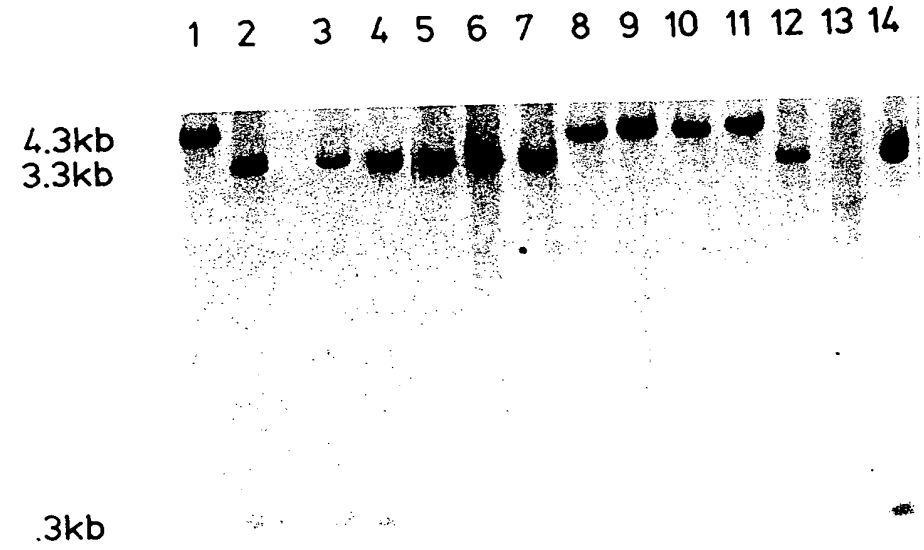


FIG. 4b

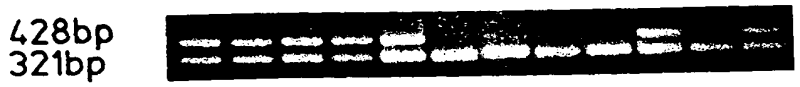


FIG. 4c

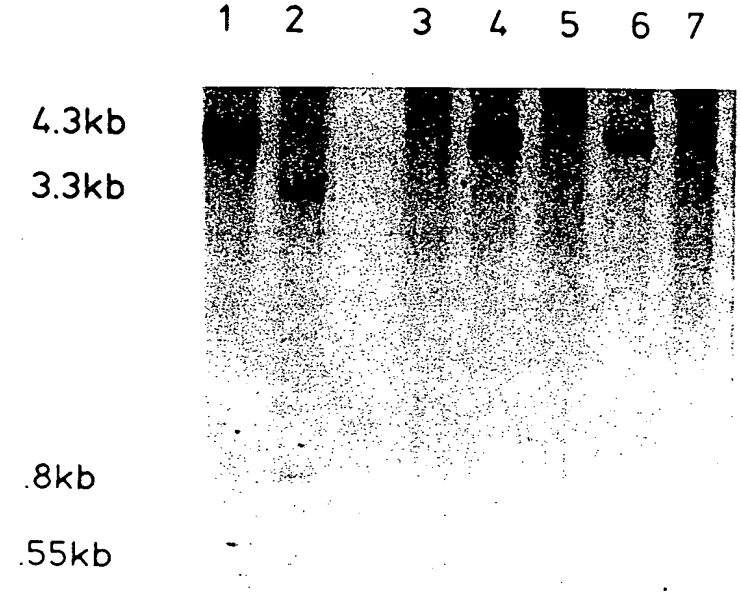


FIG. 5a

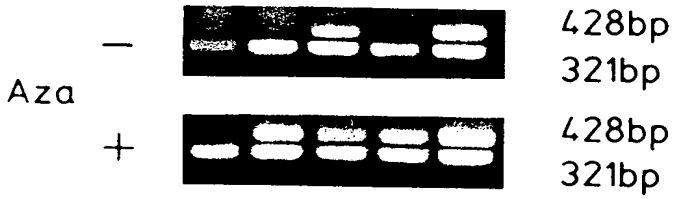


FIG. 5b

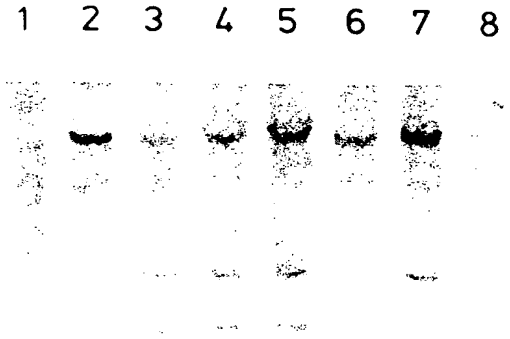


FIG. 5c

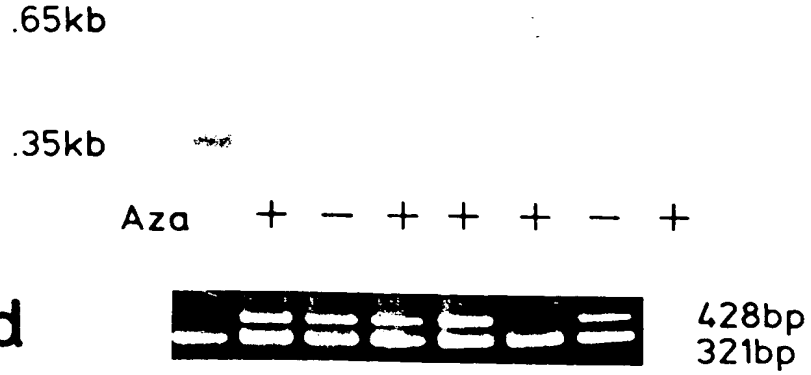


FIG. 5d

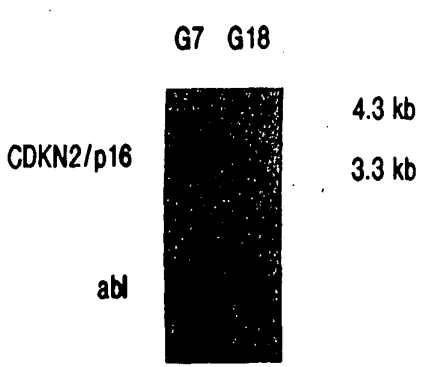


FIG. 6a

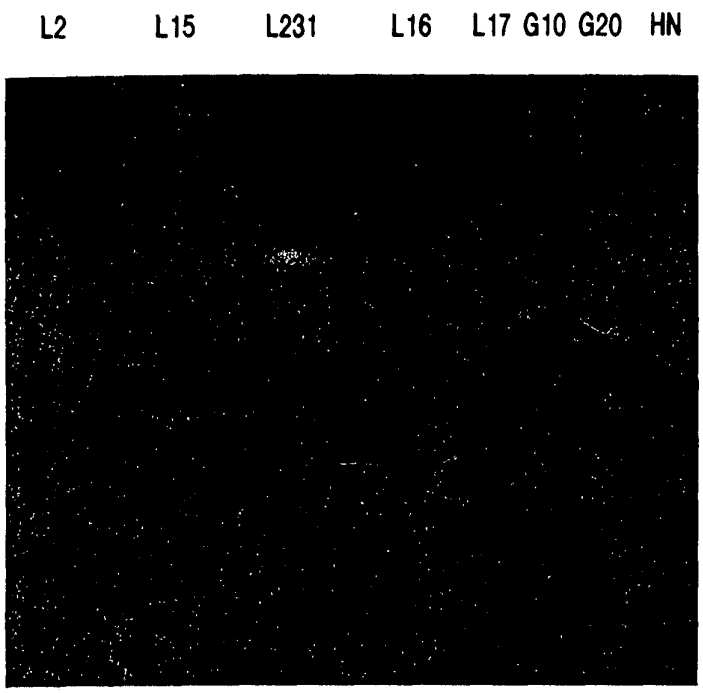


FIG. 6b

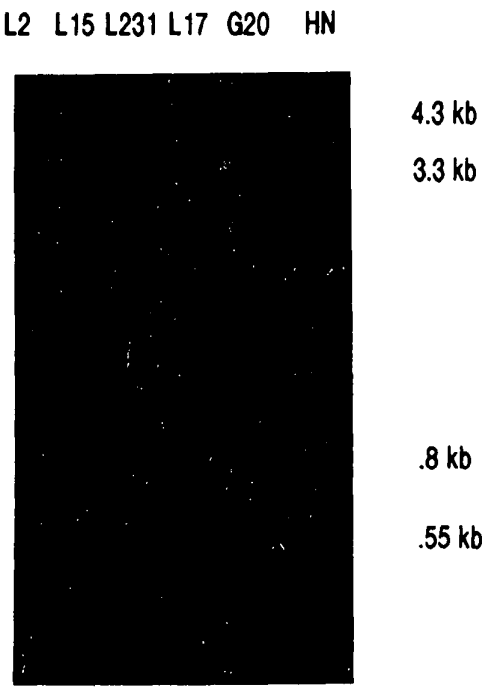


FIG. 6c

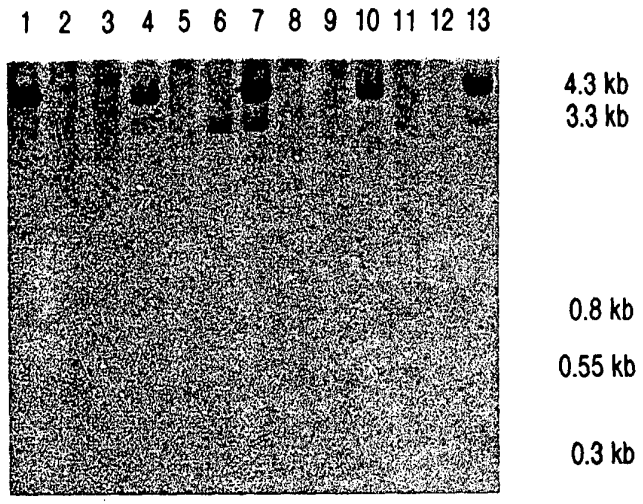


FIG. 7a

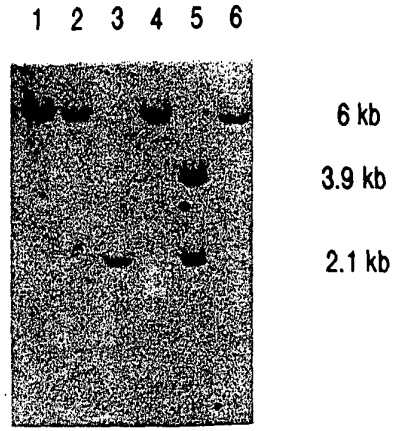


FIG. 7b

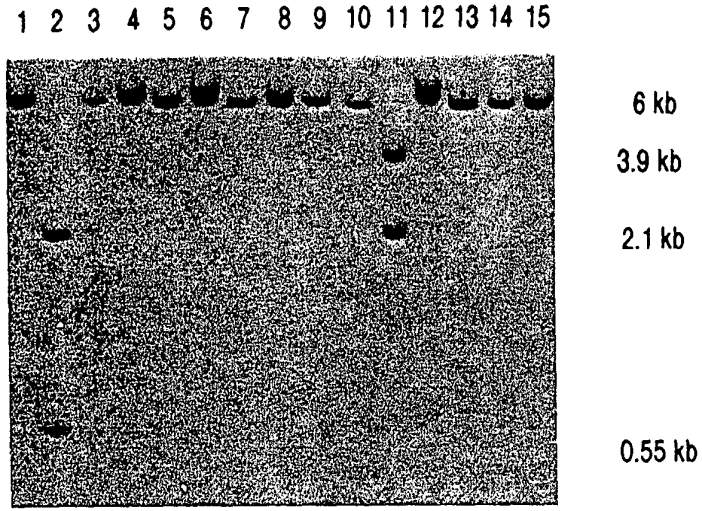


FIG. 7c

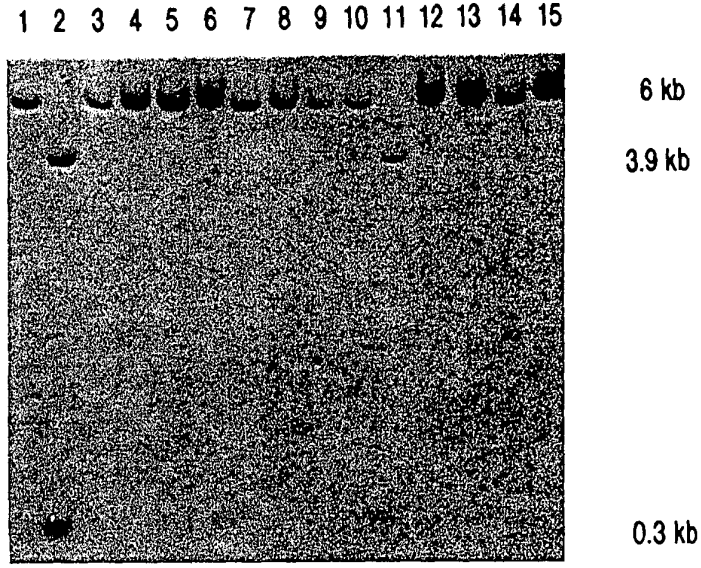


FIG. 7d

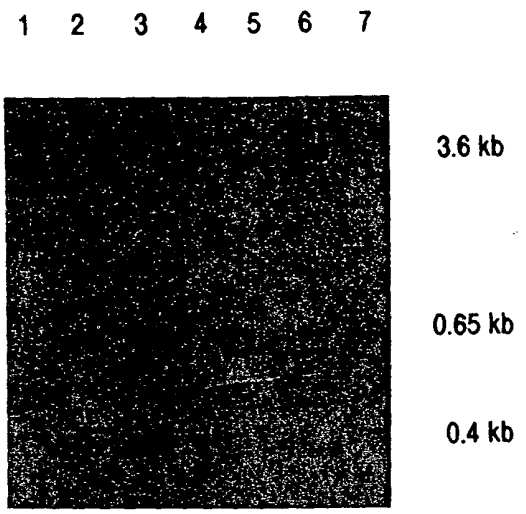


FIG. 8a

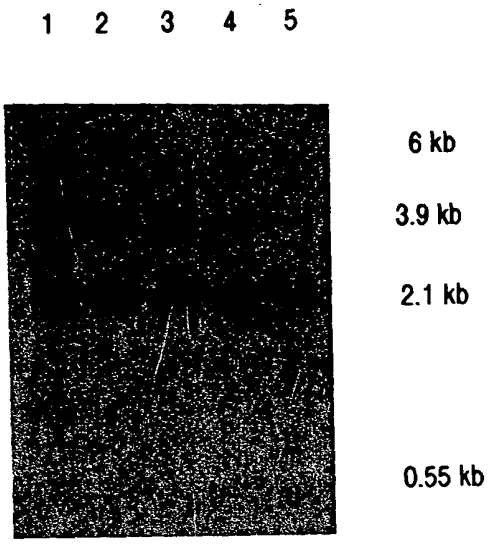


FIG. 8b

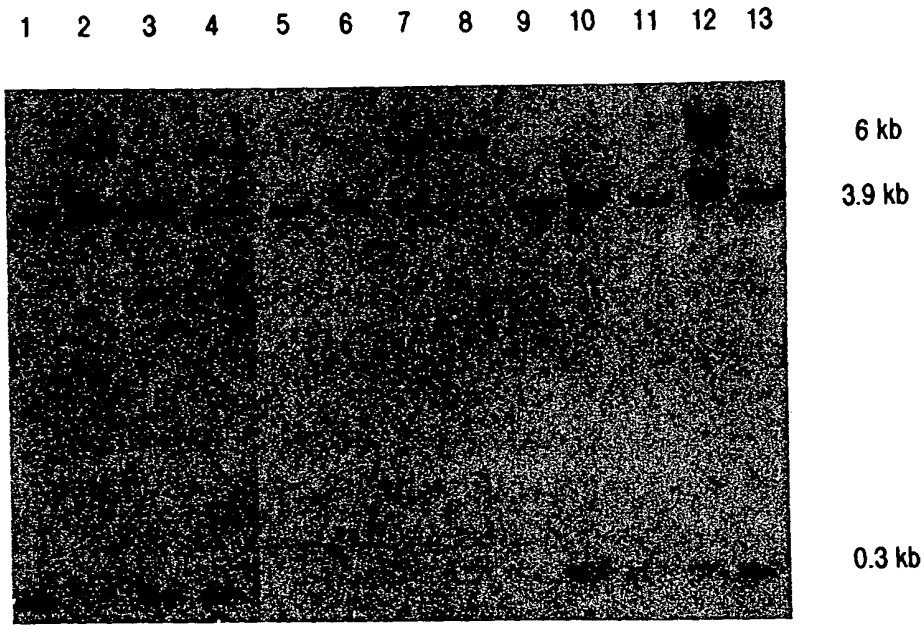


FIG. 8c

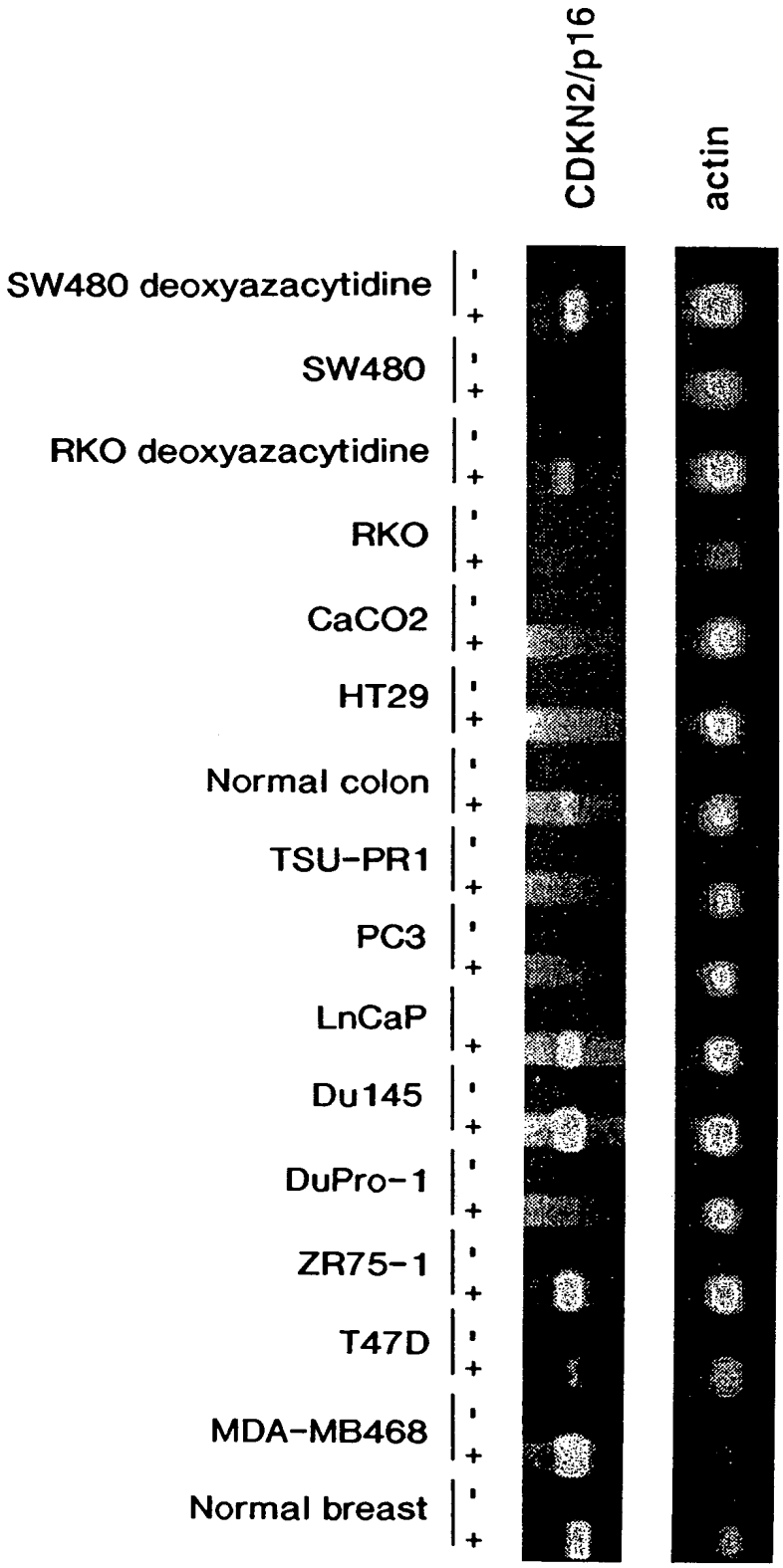

CDKN2/p16
actin
SW480 deoxyazacytidine
SW480
RKO deoxyazacytidine
RKO
CaCO2
HT29
Normal colon
TSU-PR1
PC3
LnCaP
Du145
DuPro-1
ZR75-1
T47D
MDA-MB468
Normal breast
-
+

FIG. 9